COST *and* MANAGEMENT

THE OFFICIAL JOURNAL
OF THE
CANADIAN SOCIETY OF COST ACCOUNTANTS
INCORPORATED 1920
HEADQUARTERS, 81 VICTORIA ST., TORONTO
Telephone Elgin 8914

VOL. 3 AUGUST, 1928 No. 8

CONTENTS

Extra copies of this journal may be obtained at 50c each to members and $1 each to non-members.

Changing Conditions in Merchandising

By C. L. BURTON

President, The Toronto Board of Trade
Vice-President, Simpson's, Ltd., Toronto

(This address was prepared by Mr. Burton for the annual dinner of Toronto Chapter on March 21st, but owing to his illness it was read on that occasion by H. H. Bishop, an official of Simpson's)

OUR industrial accomplishments in the production of commodities are so marked that I have thought, even in the face of a danger of wearying you, to follow the subject from the earlier days of industrial expansion in Europe.

The fourteenth and fifteenth centuries were notable in the history of Europe for the revival of learning—a period known as "The Renaissance."

The Church and the Empire of the Middle Ages had so darkened and dulled civilization that art and industry had gradually entered a state of coma.

This great dark period of suspended animation, so far as human enterprise was concerned, was followed by a movement which originated in Italy and which spread rather rapidly and in a pervading way throughout all European countries.

Just as the United States set up their particular standards of liberty and of social and political life; just as England threw off the irresponsibility of the absolute potentate and the feudal lord and established free parliamentary institutions and responsible government, even so in the earlier centuries did the Continental countries of Europe emerge from their bondage of ecclesiastical and feudal despotism.

In fact our British and American development is the finest flower from this earlier and rougher plant.

The great endeavour of man to reconstitute himself as a free being, involving assistance which he secured from Greek and Roman literature, revealed itself in a reassertion of the human mind and senses.

It, as well, opened the door to self indulgence. It involved the conquest of this planet as a place of human occupation and determined the earth's development for the benefit and comfort of mankind, in the physical sense—Established man's right to use the earth and to enjoy it.

Development took place in increased number of nationalties—languages, in invention and in the application of paper, the mariner's compass, gunpowder and printing, in exploration of other continents, in the adoption of the Copernican system of astronomy, etc.

Italy was not only first in this development but passed through all the stages of educational development, improvement of social manners and diffusion of wealth. Their literary, artistic and social refinements were spread all over Europe, not, however, free from the brutality of lust, treasons, poisonings, assassinations and violence.

Spain, France, Germany, Holland, England and other lands of Europe and lands beyond the seas were all affected by this great movement. Architecture, sculpture, painting, the work of the smith, the weaver, the dyer and the potter were developed anew.

The Arts of the Orient, the near East, Greece and Rome of old, were all resuscitated and re-expressed. The Arts and Crafts of the middle ages were transformed and the foundation of a new industrial world was laid in which handwrought commodities, of every conceivable use, were produced.

To the hand crafts of the Monastery, to Ecclesiastical metal work, was added all manner of metal ornamental articles and such secular productions as the new life of liberality and license demanded.

Religious tapestries were succeeded by tapestries depicting every human activity or emotion.

Embroideries, enamels, works in marble, stone and ivory—carvings in wood, mosaics, work of the engrosser, all inspired enterprise throughout the awakened Europe.

Europe in consequence of these fundamental experiences may be said to be the Mother of the hand produced human need.

Elementary hand made needs bear little affinity to the highly developed improved wares of to-day produced by standardized processes and by the million.

What a writer has called "the instinct of workmanship" has played its part.

Modern times began with the Era of Handicraft and gradually developed into the Machine Age of our day—the day of the labour saving device.

Handicrafts

Following Italy's beginning, industries of the handicraft order grew greatly, giving rise to trading on a rapidly increasing scale and presently to an era of business enterprise of unprecedented spirit and scope.

Central Europe ran through the same cycle of industrial growth and commercial enterprise.

Princely ambitious dynastic wars, religious fanaticism exerted their baneful influences and reversed, or retarded for generations, the first interesting developments.

The material sciences, fortunately, together with German and French scholarships, kept enterprise alive, but the lead was in the course of time handed over to Great Britain. Britain was fortunate in her insular position of isolation and safety from invasion and the intermittent raids which were the bane of continental peoples.

Free to devote her energies to steady development, Great Britain assumed the leadership of the world's trade, a position she has maintained even up to this present day. Technology and enterprise gave the British the lead in the field of machine production, so that while in the earlier periods England was notoriously behind the continent of Europe in wealth and culture, she steadily forged ahead, acquiring a special genius for world trading and assuming the position of creditor to all the world.

The Machine Age

The machine age has revolutionized the entire world of industry.

Whereas for a generation or more England dominated the machine-production field, her position has been challenged by various countries of Europe, and nowhere so definitely as on the continent. Even in Asia important economic and industrial revolution has been in progress—witness the fact that Parsees now produce cotton materials. They, together with the cotton mills of China and Japan, have brought consternation to many industries of other lands which formerly exclusively controlled the cotton trade of these over-populated ancient lands.

The era of the factory system of large scale industry is our era.

CHANGING CONDITIONS IN MERCHANDISING

What wonderful developments have crowded upon us in these last days. Daily count of articles sold and daily ordering of counter needs—such things are a far cry from the old days of dealing in hand made articles which had to be contracted for a year or more ahead of sales opportunity.

While it is true that the great bulk of our needs are supplied from domestic sources, still it is true that Foreign Lands supply us with much of the distinctive and the exclusive.

The farther we are from the staple need, the less we care about price or value, the more the foreign article appeals. One writer has referred to "our present indifference to money, to the cost of things, to the greater emphasis on gratification." The change in the Selling appeal opens the way for the foreign made product.

Notwithstanding exacting Customs valuations and tariffs and agitation for support of home industry, there continues a keener and keener interest in the article of foreign make—the thing that is "different" and therefore desirable from the customer viewpoint.

Thousands of "different" articles from countless foreign sources are available to the enterprising business. This merchandise is, generally speaking, of the prestige building kind. This field gives the publicity department something "romantic" to present—provides real news.

The present unsettled mind, growing out of the war, the extravagance of the individual accustomed to spending "war wages," the high power advertising programs, and latterly a continued high average earning or spending power, have combined to make the program of merchandising but a passing show.

As an illustration of the changing conditions in business of the present day, would quote from "Business Has Wings" as follows:—"Makers of hairpins, combs, hair nets, corsets, knit underwear, cotton stockings, hose supporters, lingerie and petticoats have come down to work in the morning only to find that the business they have built up by years of hard work has vanished into thin air overnight."

"A hotel bathroom can be completely refinished in an afternoon and used for its legitimate purpose next morning; a floor done one day may be walked on the next."

"Bread making, another staple home industry, for generations the standard test of the ability of the housewife, has suddenly shifted to the chain bakers."

"Some industries seem basic. One would imagine the ice business belonged in that class, but meanwhile engineers have been experimenting with artificial refrigeration for domestic use, many homes are equipped with electric refrigerators. A quarter of a million electric refrigerators have been installed in homes in the last four years.

"The iceman calls no more.—Don't wash, send it to the laundry.—6,100 engines—no change Toronto to Montreal—100 cars to a train.—Everyone with a car and now more two-car and three-car garages.—Bobbed heads with permanent waves.—Everything a women wears in a four ounce package.—Your sermon over the radio.—Your mail by air route.—Colour and design breaking down sales resistance."

Changing conditions in merchandising demand more scientific handling—more self thrown into service—more moral purpose, more and more dependable publicity, out of such stuff comes volume, profits and success.

There is still place and profit for the earnest merchant who gives his best service and who knows his business. HE it is who meets the changing conditions without dismay and still serves and prospers.

Education For Business

"It still seems to be true that public school pre-supposes a high school course, a high school pre-supposes a university course, and while in our commerce schools and technical schools we have valuable institutions, it is probable that we have much progress to make along the lines of requiring no time to be given to any subject where there is not an adequate appetite and interest on the part of the student."

Business is accused of requiring for money making purposes purely scientific and technical training as against cultural training.

"I venture to suggest there is nothing more needed today in business to meet the changing conditions in merchandising than that from our schools should come into business life, those who have been equipped with the best cultural training, even classical training which our schools and universities can provide."

The quality above all which is necessary for accomplishment is the ability to compass in thought, within the shortest space of time, and in the most thorough fashion, the problems which present themselves, and, on the other hand,

to have such ability to think, accompanied by the sort of human quality which spells influence, enables a person to put into effect with enthusiasm and the full co-operation of others such measures as his mind conceives. These qualities are not necessarily in those who are purely technically trained, in fact it was the speaker's conviction that they are more likely to be exemplified in the person who has the more classical or cultural training.

Almost all waste is caused by failure on the part of those who have it in their power to serve well or to serve badly in the various enterprises which constitute the service which we expect to render to one another.

Waste and poor service are almost synonymous in merchandising.

It is the omission by those who fail in business to ask themselves what principles should be observed in the conduct of their business that spells failure. Having asked the question and answered it to themselves they have either failed to measure themselves by the principles laid down or have lacked faithfulness, conscience or courage or physical or financial strength to carry out their undertakings.

Larger Production

We may say the first years of the century have been extraordinary for the great development that has taken place in the Hydro-Electric Power Development. This is not only true in Ontario; it is true in practically all countries of the world. Another great instrument which has come into very general use is the internal combustion engine, which means that we have in small space a very usable unit of power. These and other forces added to all of the other means and methods which experience has accumulated for us have enabled us to produce our needs in large quantities and at a greatly less cost compared with the volume produced and the cost of such commodities but a few years since.

Thus, it is to-day that the housewife and in fact all members of the family have at home and at their work, conveniences and luxuries which a generation or more ago were not even available to the kings of the earth.

Farm Dividends Stationary

Factory production, therefore, can be said to have shown a very material development along economic and

scientific lines. The purchase, transportation, distribution and sale of natural products in the way of animals, vegetable and grain produce have not been conducted so that the producer reaps a reasonable reward for his labour and hazards. In fact, in the field of distribution the last few years has shown but a very small development.

Retail Distribution

The late Charles P. Steinmetz had pointed out that while up to say 1918 there had been great strides in production there had been no corresponding revolution in the distribution of commodities.

Even after the advent of our great general department stores and mail order systems there continued our old hit and miss small store now so sadly hit by the big fellows and by the chain store systems.

Hit and Miss Stores

May we examine the raison d'etre for the existence of many retail stores?

Is it not the fact that most of our smaller retail stores are a result not of demand by the public nor because of economic necessity, but rather because of real estate speculation in new areas which seem to bring an opportunity to the speculative store builder, and what is the result? Row upon row of empty shops—a standing invitation for some one to enter upon the hazardous life of retailer.

All very well if the storekeeper knows his line and is serving the public after a reasonable period of training and experience.

All very well if the embarking storekeeper has sufficient capital to swing his project while his public is becoming acquainted with and gaining confidence in his establishment and testing his service.

But how many can answer these tests?

Statistics, if available, would doubtless show many casualties,—most of them are due to:

1. Lack of capital.
2. Lack of character.
3. Lack of experience.
4. Lack of imagination and
5. Absence of good accounting.

The exciting retail days of war and immediate post war days have passed into history and with them have disap-

peared all such artificial conditions without regard to the qualifications of those engaged in trade.

Business Has Wings

Early in the year a very illuminating article in the Atlantic Monthly told of the quick and radical changes which business had to take into account to-day, saying:

"The present indifference to money, to the cost of things, fewer appeals to thrift, greater emphasis on gratification, the logical result of abundant money, shorter hours, the five-day week, higher wages, and the utter disappearance of the old-time price levels for staples, have changed the entire selling appeal of many products."

"Chemists fooling around with the vast stock of nitrocellulose left over after the war and seeking to find a peaceful use of it discovered a new sort of finish that is not paint or varnish or stain or enamel, but shows symptoms, at least, of one day displacing all of them."

"As it develops a crisis may confront linseed oil plants, flax growers, zinc and lead mines, varnish makers, importers of kauri gums, turpentine distillers, and a legion of industries whose products are the raw materials of the paint and varnish makers."

"Business is to-day the profession. It offers something of the glory that in the past was given to the crusader, the soldier, the courtier, the explorer, and sometimes the martyr —the test of wits, of brain, of quick thinking, the spirit of adventure, and especially the glory of personal achievement."

Chain Mail Stores

The modern large store of many departments, the modern mail order business and modern chain store have all come into existence, growing out of the inevitable demand for a more efficient service and more economic distribution.

I want to quote you some of the implications that follow from the transformation in quantity production and standardization of operation which have entered into factory economy to which I have already alluded as summarized by F. W. Shibley of New York in an address upon "The Banker and the Budget."

"Have you appraised properly the marvelous development which has taken place within the last quarter of a

century in machinery and the means for producing electric power?

"Have you seen a bank of twenty-four broad automatic looms grinding out sheetings and tended by but one weaver and a helper?

"Have you seen a continuous automatic machine housed in one building produce 2,000 finished automobile frames in one day from sheet steel, its actual workers being iron men, its human attendants being a limited number of skilled mechanics observing its operations?

"Have you seen an automatic gear cutting machine receive a blank gear from the hands of a common workman, perform twelve distinct functions, deliver the finished gear to its man and simultaneously record on a chart the time of its functions and in addition spit oil at the man if he fails to deliver the blank or receive the finished product at the proper moment?

"Have you seen 900 beautifully finished and elegantly equipped automobiles of an average price of $1,700 roll out of one plant in a single day?

"Have you witnessed five paper making machines produce newsprint at the rate of 250 tons in twenty-four hours?

"Have you seen 50,000 k.w. of electric power produced per day in a moderately sized building from powdered coal with only a few men walking about leisurely?

"If you have seen such miracles performed you must have sensed the significance of quantity production and wondered what was to be the economic and social result of this rapid evolution of machinery and power production.

"Have you not been impressed by the thought that quantity production would fill up one of these days the world reservoir of consumer capacity to purchase unless there were found a way to control production that it would balance constantly with consumer demand?"

How to Succeed

Let us now examine the elements which should be taken into account in entering the retail business. First we must have capital—no one should enter business putting the onus on either his customers or his creditors, and while it is very tempting for a young man or for that matter for an older

man, who has never seemed to get out of the beaten track to venture into business for himself, it is seldom that success follows any enterprise which starts off without capital enough to pay for the establishment and merchandise with which he begins his trade.

Cheap Money

The plethora of cheap money may help business, but may be its worst enemy if it tempts to expansions beyond the demand reasonably to be expected or the spending power which is likely to be maintained.

Neither will the combination or merger benefit the public unless it has in it more than the exploiters desire to cash in while the goings good.

Opportunity

Opportunity to enter business should be judged from the standpoint of the need for the service about to be rendered, and this thought involves the question of whether or not the field of such service is already more than occupied. In my earlier remarks in which I have referred to Hit and Miss stores, this might be taken into account in considering this phase of the business problem.

Good moral standard and reasonable experience are necessary. It is possible, although not probable, that a business with plenty of capital, but lacking in moral standard, may succeed.

One reason for the solid growth of some of our big establishments is the maintenance of good standards and the recognition by the public of such a safeguard to their shopping.

There is still reward for moral dependability as reflected in goods and service.

There is still reward for the man ready to serve who is able to serve by reason of experience and willingness to work.

Emerson said "A successful institution is simply the lengthened shadow of a single man."

Businesses which experiment upon the public instead of serving from experience are responsible for high expense ratios and narrowing margins.

Turnover and Net Results

The common practice is that this year's turnover and net results form the criterion for future operation—for next year's activities.

Such a hypothesis was quite all right before the war because everyone did the same thing, and ups and downs were moderate enough to enable the astute merchant to follow the changes and adjust himself to the various situation.

Even during the war and during the after inflation "comparison with last year" was quite safe because increase in volume of sales and increase in gross exceeded the increase in expense—result—always more net.

Enter Budgeting

The precipitous fall in values affecting inventories and commitments and involving loss in some cases running into millions, the loss of purchasing power due to sharp adjustments in employment, in wages and in profits wiped out all basis for calculation, hence the modern business budget.

Some were slow to adopt this new idea, some were too late—so much the worse for them.

Those who did budget and based their estimates, not on last year, but upon the prospects of business as judged by existing conditions of commodity markets, purchasing power, employment, etc., were those who weathered the storm with the least amount of jettisoned cargo.

"A budget may be termed the composite brain of a business on paper, and the operation of a business under the control of the budget, the function of this brain."

"Control is the magic word of the future. Control of production is the safeguard of the economic situation."

"The control of production does not limit or restrict consumer capacity to purchase. On the contrary it increases and extends such capacity through the discovery of new markets revealed by sales analysis and through an elimination of waste caused by the senseless sacrifice of excess stocks of merchandise."

Budgeting is, however, a study in itself and I must leave it, but its effect upon "Changing Merchandising" cannot be over-estimated.

MERCHANDISE

By Milton Hayes

Merchandise! Merchandise! Tortoise-shell, spices,
Carpets and indigo—sent o'er the high seas;
Mother-o'Pearl from the Solomon Isles—
Brought by a brigantine ten thousand miles.
Rubber from Zanzibar, tea from Nang-Po,
Copra from Hayti and wine from Bordeaux;
Ships, with top-gallants and royals unfurled,
Are bringing in freights from the ends of the world—
Crazy old wind-jammers, manned by Malays,
With rat-ridden bulkheads and creaking old stays,
Reeking of bilge and of paint and of pitch—
That's how these ocean-girt islands grew rich;
And tramps, heavy laden, and liners untold
Will lease a new life to a nation grown old.
Hark to the song of the shuttle and loom,
"Keep up your commerce or crawl to your tomb!"
Study new methods and open new lines,
Quicken your factories, foundries and mines,
Think of what Drake did, and Raleigh and Howe
And waste not their labours by slacking it now;
Work is life's currency—earn what you're worth,
And send out your ships to the ends of the earth.

Costs in Photography

By CHARLES RICE
Rice Studio, Ltd., Montreal

(A paper read before the Ontario Society of Photographers, and reprinted here from the "Bulletin of Photography")

TWENTY years ago some politicians passed a bill with reference to canal transportation for the New York State Government, which meant an expenditure of over one hundred million dollars. Fortunately, those who knew their business, from a cost standpoint, made wiser counsels prevail and the money was never spent and thus taxes never wasted. To know the cost of transportation saved the day.

While politicians, without knowledge of the relative cost of coal, do some ranting at appropriate periods about the export of coal to Canada, especially when there is a shortage, those in the business know what Scotch and Welsh Anthracite would cost laid down in Canada, and believe it would take very little to lose the Canadian market. So if our U.S. friends are cold sometimes, let them take cold comfort in the fact that they are short of coal because the American coal operators are tenaciously holding the Canadian market against the British product. These operators know the relative cost, and that is why they act that way. Cost is the basis of their policy.

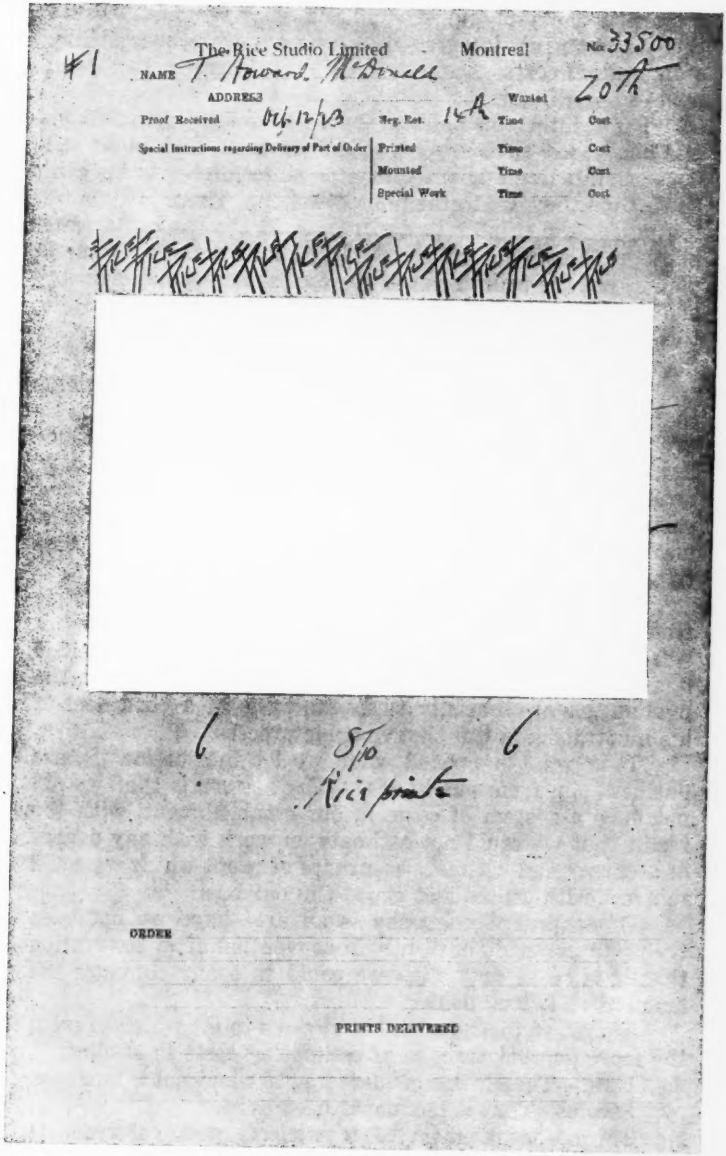
In the meantime, our photographer is working up a very fine print of the Woolworth Building from a negative he has made under great difficulty and at great cost. And now the print is finished and he shows it to the owner of the building.

"How much?" asks the owner.

Then the photographer puts on that David Harem smile and wonders just how pleased the customer is with the picture and how much he would be willing to pay.

The photographer does not work on the basis of cost, and the surprise is that he gets along so well.

But the printer worked in the same way for years, and his plant was about the same size as that of the photographic studio, with his foot press and power press all housed in the cellar, but one day, like the prodigal, when he had eaten up all his substance, he came to himself. He began to think about costs and organized societies where they exchanged information on costs and standardized their


#1
The Rice Studio Limited
Montreal
No. 33500
NAME F. Howard McDonell
ADDRESS
Proof Received Oct. 12/23
Neg. Est. 14A
Wanted 20th
Special Instructions regarding Delivery of Part of Order
Printed Time Cost
Mounted Time Cost
Special Work Time Cost
6
8/10
6
Rice print
ORDER
PRINTS DELIVERED

costs and thought and dreamt and slept with cost—until the Government intervened, because he so successfully standardized costs, eliminated any decent competition—and made so much money.

The printer now houses himself in ten storey buildings and illustrates, photographs, photo engraves, book binds and does one hundred and one things no more foreign to his own trade than they are to the photographer. There is no more reason for the printer to do Fashion Photo work than the photographer to do printing. They both started with small plants; but the printer put in the cost system—and grew by adding department after department in perfect safety, while the photographer kept in his isolated splendour among the finer arts.

And I suppose he thinks he is so much more artistic than the printer! But both the printer and myself have grave doubts about it when we see the beautiful reproductions and illustrations shown in our magazines. One only needs to look at the beautiful sepia tones supplied in the weekly papers to realize where we stand, when they can make such work from publication prints of our own negatives.

I am not going to discredit the progress we have made from the old Tintype studio on wheels, but please remember what the job printer was at that time, and ask yourself if he had any better opportunity or any wider scope than the photographer; especially when the basis of a good deal of his illustrating is the photographic process.

Then what happened when we let the motion picture business slip from our hands? The answer is that we did not have a system of costs in our establishment, with the result that we could not estimate on work with any degree of accuracy and with any assurance of profit which we could reinvest with consequent growth in our business.

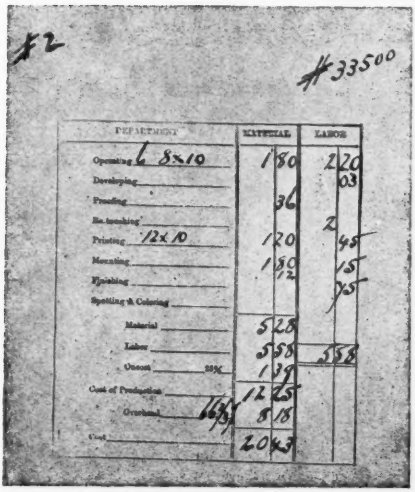
Of course, photography is an art—have we not been trying to persuade ourselves in convention after convention that it is so—I only wish we could as easily convince the landlord and stock dealer.

There are three reasons that come to me which prevent the more general practice of estimating costs in studios.

First—That it is considered an art and not a business.

Second—That it has never been done.

Third—The element of mysticisms with reference to costs in general just amounts even to superstition.



Now a strong "Will to cost" will overcome these objections. If bound to ascertain your cost, let me assure you that it is possible by any sensible method devised in consultation with any cost accountant.

If I can assure you that we have inaugurated a cost system that is satisfactory to us, anyone should therefore be assured that the superstition can be dissolved. For this reason I am submitting our system —but any other will do, so that it is not necessary to explain it in great detail.

We use a system which attaches the proofs of the order (by a gum strip to a long yellow sheet. On the back of this sheet, which is No. 1, we have a form printed, which is No. 2. You will note Form No. 3 is the printer's, and he is dealing with order No. 33500 shown in Form No. 1, and you will see that his printing cost (45 cents) is shown on Form No. 2.

The printer has his work-sheet (No. 3) tacked up in front of him, and when he determines the labour cost, for instance, of this order, 45 cents, he enters it on his work-sheet No. 3 and on Form No. 2.

The total of the labour cost is entered on Form No. 4, and for this order you will note it is $5.58, and the plan is to get, if possible, this total labour cost to equal the total payroll, which applies to direct or manufacturing labour cost.

You will note that the totals of No. 4 are recapitulated on the same form as No. 5—the week ending October 20th.

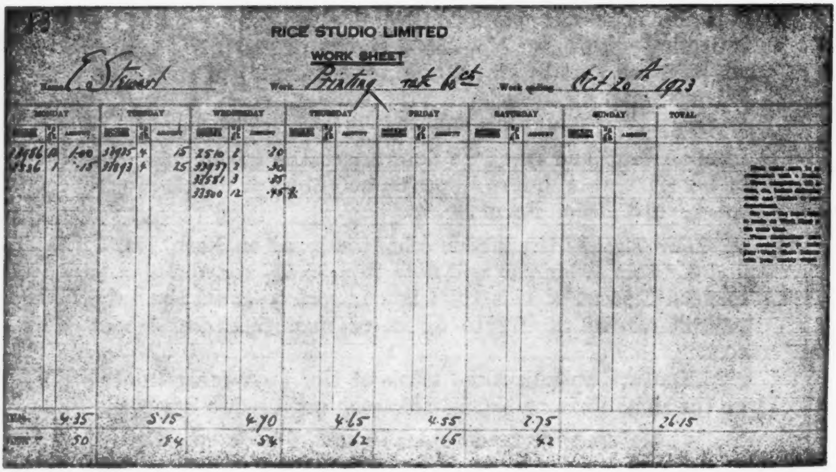
While we have used actual figures, I have not filled all the figures out which would necessarily make the total, but

they are in our original records on file in the office. I call it a balancing cost system to the payroll, and insofar as it does not do so, the matter is always forced upon my attention. The work sheets are an incentive to the workmen, and they like them and insist that everybody should use them.

We have nothing which discloses to us in such a convincing manner the leaks and inefficiency in our business, and these forms will show you not how well we are running our business, but how badly. I am not at all proud of things or satisfied, only insofar as I think they would measure fairly well with most studios that I know of.

For instance, refer to Form No. 3. You have the happy idea that your printers do much better work and make you more prints than our man, Stewart. Just draw out a similar form and put it in front of your printer or yourself. You may beat it by so little that you will get more interested in costs.

To revert to Form No. 2: I think that the figures are fair, after adding 25 per cent. to direct labour, according to our annual figures, and to add 66 2/3 per cent. for overhead. You may think it is high, but I find most concerns in other lines (who do some retailing and manufacturing, as photographers may be described) have determined 66 2/3 per cent. or more, in consultation with their auditors. Some


RICE STUDIO LIMITED

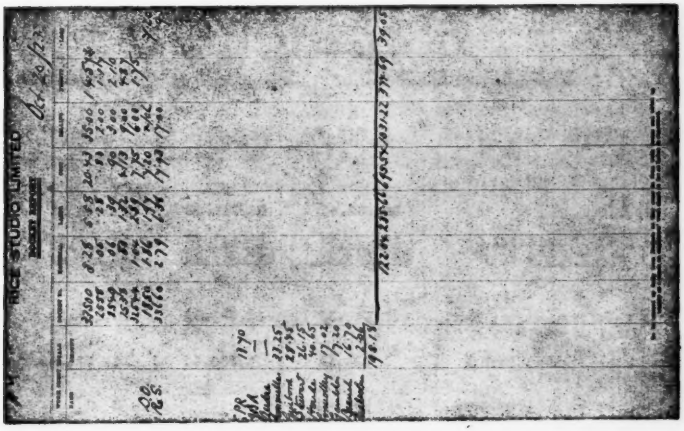
WORK SHEET

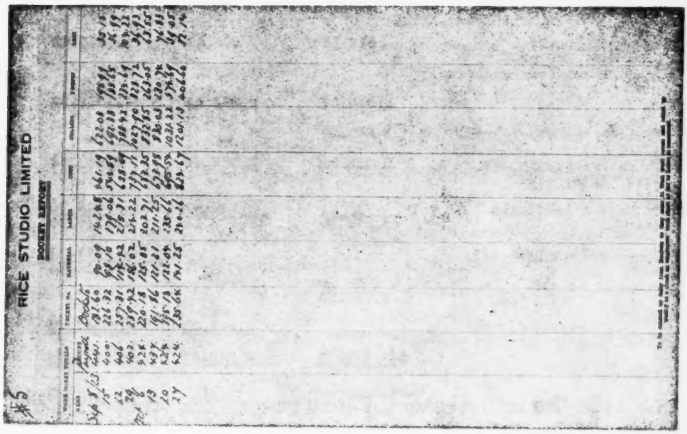
Name E. Stewart   Work Printing   Week ending Oct 20th 1923

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	TOTAL
	4.35	5.15	4.70	4.65	4.55	2.75		26.15
	.50	.84	.54	.62	.65	.42		

even go as high as 100 per cent., and I have heard of a printer who determined that even 128 per cent. was not too high.

Of course you may want to take on work as a "filler," which will keep the staff going, keep down overhead and all that sort of thing.





I am assured, however, that if the photographic trade was thoroughly convinced of its costs, the photographer would soon get tired of doing so much work merely for overhead and advertising.

Let us have some sense about this thing, let us look up and down the country at our trade and we will find that the photographer who actually refuses a lot of work makes more money than the one who is trying to do everything that comes along. In the first instance, the man retains his

FORM 6

RICE STUDIO LIMITED

PROFIT & LOSS STATEMENT - YEAR ENDING FEBRUARY 28TH 1923

		COMPARATIVE FEB. 28, 1922.	COMPARATIVE FEB. 28, 1921.
By Sales	62,602.65	88,342.32	81,258.96
To Cost of Material	18,026.38	39,137.93	30,182.64
TOTALS	$44,156.27	$49,204.39	$51,076.32
To Salaries, Wages, Rent & Other Expenses	37,144.32	38,283.99	36,108.78
To Depreciation Furn.& Fix. etc. 10%	1,588.31	1,336.95	1, 354.05
To Loss on sale of Furn. & Fix	595.98	-	-
To Written off Bldg. Improvement A/c 20%	446.63	-	-
To Bad & Doubtful A/cs W/o less $250.00 Transferred from Reserve	842.15	896.06	1,370.72
To Advertising	1,585.02	2,874.82	1,718.98
To Life insurance Prem.	860.50	-	-
To interest, Bonuses, Xmas Gifts, etc.	3,233.59	2,394.42	3,153.39
To Cuts & Halftones Written off	46,296.50	249.90 45,506.14	249.90 43,955.82
Deduct: Fire Loss Adj.			521.38 43,434.44
NETT LOSS	1,720.23		
= NETT PROFIT		3,698.25	7,641.88
	$44,576.27	$49,204.39	$51,076.32

profit; in the latter case, the man cancels his profit with his losses.

Our Form No. 5 shows, in all conscience, losses in comparison with the profits, and believe me, it is hard enough to improve the figures in those last columns. It takes

eternal vigilance to keep the loss figures down, and I am thankful to the docket for being able to show in black and white how certain work does not pay or even incurs a loss, and it makes it possible for us to decide with much more intelligence which is the most profitable work, how to do it the most economically and how much to charge.

My figures for overhead and direct labour were based on Form No. 6, and in passing I may say that this form is worth consulting, for it gives the total figures for the year 1921, '22 and '23. By the time we had a net loss in the past year, it was time to give costs some serious consideration. The result has been that the figures for 1924 are much improved, through having just a few hundred more sales, a few hundred less cost of material and few hundred less expenses.

THE TREND OF PRODUCTION COSTS

Vital Information for the Production Manager, the Purchasing Agent and the Cost Accountant

COMMODITY prices have weakened slightly in the past few months. Compared with a year ago, they are about two per cent. lower. The principal declines from April to June were in grains, rubber, sugar, vegetables, furs, hides and skins, milk, eggs, wool, silk, lead and tin.

A few commodities have gone up, notably the following: Fruits, livestock, boots and shoes, meats and poultry, cotton, copper, silver, zinc, lime and cement.

Producers' materials at the end of June averaged about the same as at the end of March, but about two per cent. below June, 1927. For the building industry they were up a little, because lumber had advanced slightly. For meat packing they were higher, but for the fur industry and flour milling they were lower. Cost of materials for other major industries show no important change.

Goods for consumption averaged about two per cent. lower, due chiefly to declines in milk, vegetables, sugar and other commodities mentioned above. Manufactured lines, especially clothing, averaged higher.

Index Numbers of Commodity Prices

	June 1927	March 1928	June 1928
Producers' Materials (for building)	148.0	147.8	150.2
Producers' Materials (for mfg.)	148.1	147.0	147.2
Producers' Materials, all	150.6	147.2	147.7
Consumers' Goods (foods, beverages and tobacco)	157.5	154.4	148.6
Consumers' Goods, other	150.5	153.6	155.2
Consumers' Goods, all	154.4	154.1	151.5
All commodities	153.5	152.8	150.2

For the above index numbers, the averages for 1913 are taken as 100.

Employment is unusually plentiful, according to latest reports. The index number, based on employers' returns as at July 1st, was 116.3, compared with 112.4 the previous month and with 108.4 on July 1st, 1927. Trade unions report an average of only 3.7 per cent. unemployed in June, compared with 5.2 per cent. in May, and with 5.2 per cent. in June last year. There were 21 strikes and lockouts in existence in June, involving 2,901 employees, these figures showing little change from the previous month or from a year ago. Eleven of these were carried over into July; they were as follows: fur workers, Toronto; two involving embroidery workers, Toronto; ladies' clothing factory workers, Toronto; plumbers, Kingston; sheet metal workers, Kingston; structural iron workers, Toronto; teamsters, Edmonton; rubber factory workers, Montreal; clothing factory workers, Montreal; carpenters, Winnipeg.

Business throughout Canada is very active, and prospects are for a record grain crop. Money has become somewhat tighter. New capital, both for short term loans from banks and for permanent investment, is not so readily available, and rates are slightly higher.

Standard Costs—For Profit-Making

By ERIC A. CAMMAN, C.P.A.
Peat, Marwick, Mitchell & Company, New York

(An address before the Typothetae Cost Accountants' Association, New York)

THE use of standard costs is a great advance in the development of industrial accounting methods towards making these a helpful instrument of management. The time is not far off, if it is not already here, when the accounting department will be recognized to be of as much importance in the control of business as other departments formerly regarded paramount. Advances in methods will bring this about.

In view of the fact that the word "standard" is used in different senses, it should be understood that for our present purposes the subject is not uniform costs. The uniform accounting methods which have been developed by the United Typothetae of America are called a "standard method" of accounting, and properly so; but we are now to study an accounting system using basic standards of cost as a method, apart from uniformity in the practice of such method.

The aim should be, of course, to bring the standard costs as close to a practical ideal as possible. It is obvious, however, that they must ever be approximations of perfection under given conditions at a given time. Therefore it is a mistake to tinker with the standard costs perpetually to try to incorporate exactly the effect of countless minute changes that change again before they can be figured. The object should be to find out the variances which are taking place from basic standards of reasonable expectations; to find the trends of these variances and their effect upon profits.

The Definition of a "Standard Cost"

Applying this principle, a standard cost may be defined as the manufacturing specifications of an article priced and extended at fixed, basic rates for the components of materials, labour and expenses. The extensions are the standard costs of the elements; the sum is the standard cost of the article.

Having clearly in mind what a standard cost is, the next logical thought is to ask: Why figure it when it is after all not the real thing, not an actual cost? Why not concentrate effort entirely on finding the actual cost correctly in the first place, instead of going to the trouble of figuring an imaginary cost and then having still to find the true cost?

No satisfactory answer is to be found in the trite statement that a true cost is a debatable if not an impossible thing to obtain, owing to the necessity for arbitrary apportionments among elements of cost, so that refinements of calculations become merely elaborations upon initial assumptions.

The answer will be found by considering the fact that actual costs, no matter how precise and correct, expressed alone are inadequate for industry's requirements. Able accountants for many years have devoted their efforts to advancement in the art of finding actual costs correctly, with notable progress that need not now be reviewed. Yet the bald fact remains that, with all this progress, the resulting data are of limited practical help in managing a business, when unaided by devices to interpret the data. Comparisons with other past periods are helpful but not enough.

The true import of tabulated actual results becomes apparent only through a process of reasoning by an executive who has long experience and a thorough knowledge of the business; he reads the figures by reflection, as it were, in a mirror which dissolves actualities into variances and trends. He must do this before the figures mean much in the way of constructive help and guidance. As this is usually the farthest removed of the "musts" crowding for attention, it is deferred for a more opportune time which seldom comes, and he receives less help from accounting data than he should, or sometimes even than he can get by other more direct and simpler contacts and signs.

Assuming that you will agree with me that this is so, why is it so? Why is the presentation of actual results alone inadequate? Because of a few fundamental conditions.

Industrial World Ever-Moving

The industrial world is merely one in a universe of moving worlds composed of cyclic systems from the smallest to the largest conceivable; from the amoeba of the biologist

and the etheron of the physicist to the sums of the astronomer. All things of which we know are in motion, and there can be no exception of the things sought to be expressed in the world of business by tabulated actual figures; by finite figures, let it be remarked, which can only express the state of affairs at a given instant under momentary conditions, all moving. Imagine catching the drift of a movie through still pictures thrown on the screen once each minute!

These moving activities are not separate individual things but are all interrelated and interdependent in complex ways. All life is rhythmic and cyclic in tendency, and the effects we see—the results we try to portray—are the consequence of the peculiar combination of rhythm and deviation from rhythm which obtains. If we can control the combination we can produce the effect, in proof of which we need only look about at scientific achievements—alternating current, the radio wave—or if we can understand the combination we can foretell the effect—as weather-forecasting, timing eclipses, etc. Perhaps the connection will at first seem remote, but it really is not, for again industrial activities cannot be treated as exceptional to these fundamental conditions. While we cannot yet comprehend the laws or control the forces governing industry and commerce, we can at least recognize the truth that all our problems are problems of proportions between moving activities, and shape our accounting efforts accordingly.

Clearly it is not so important to know what products cost as it is to know what they cost in relation to what they sell for; and in relation to what they were expected to cost and sell for. How much is produced is of interest only in proportion to how much is sold; how much is sold, in proportion to how much was expected to be, or should be, sold. And so on, throughout all the detail of a business, we will find that no one fact or circumstance means anything by itself, and no list of all of them in the form of tabulated figures which add is illuminating. for the reason that proportion cannot be expressed in absolute terms.

Thus we come naturally to the relation of actual costs to basic standard costs which express in fixed dollar values the proportion expected to obtain in any present combination of circumstances. Against such a background variances and trends can be brought out, and their effect and

probable future effect on profits reasoned. To a certain extent the causes of variances can be shown, rather than their effects merely. Is it not evident that by this method the burden of analysis and interpretation can be lifted from the executive, by the simple expedient of recording in the form of standards the knowledge and experience that he would otherwise have to read into actual figures in order to get at their meaning?

The standard cost method, which we shall presently examine more specifically by the aid of a hypothetical case, lends itself well toward overcoming some of the defects in former methods of cost accounting. Chief among these are over-emphasis upon job costs and excessive refinement of distribution and computation. By over-emphasis upon job costs I mean the design of accounting procedure having as its principal end the ascertainment of the actual cost of a particular job after it is finished. This usually results in building up elaborate systems that can be of little practical help in current management or in deciding future courses of action. By aiming at the variances from expectations in the elements of cost, the standard cost method permits the furnishing of data sooner and in a manner to be of aid in controlling what the job costs shall be.

To focus these general remarks into a concrete example (that is not at all comprehensive in scope but may be helpful in following the application of the principles which have been described) there is given below a set of assumed figures. Table I, "Data required," contains eleven simple figures all readily obtainable by any method with the exception of item 9. The figure shown against item 9 is derived by pricing production at previously established standard costs each or per thousand. Table II, "Resulting ratios," shows certain ratios, all based on the figures given in Table I. It may be interesting to follow the calculation of the ratios.

Table I—Data Required

Capacity	
1. Machine hours	1,000
2. Man hours	1,500
Budget	
3. Wages	$1,200.00
4. Supplies and expense	1,800.00
5. Standard cost	$3,000.00

Table II.—Resulting Ratios

A	B
to budget	to standard
88.2	126
66.5	95
75.2	107.4

Actual costs			
6. Wages	$1,058.40		
7. Supplies and expense	1,197.00		
8. Actual cost	$2,255.40		
Operations			
9. Production priced at standard cost per M	$2,100.00	70	
10. Actual machine hours	770	77	110
11. Machine effectiveness	91		
12. Actual man hours	1,260	84	120
13. Man effectiveness	83.3		
14. Wage scale level	105		

The first ratio to be calculated is that of output. The production (item 9) in terms of standard costs, is 70% of the budget (item 5). The ratio 70 will be found against item 9 in column "A."

All the other ratios in column "A" may now be found in the same manner by dividing the "actual" figures by the "capacity" or "budget" figures for corresponding items. For example, wages (item 6) actually stand at 88.2% of the budget (item 3).

The ratio of actual wages to budget, 88.2, contains the influence of a change in output. To remove this influence we divide the wages ratio 88.2 by the production ratio 70 and find that the ratio of actual to standard wages for the work actually done is 126 (item 6, column B). In other words, 88.2% of budgeted wages were paid for 70% of budgeted production.

The actual machine hours (item 10) stand at a level of 77 to the budget, and inasmuch as this occurred at the same time that output stood at 70, it will be clear that 110% of standard machine hours was used. It therefore follows that the machine effectiveness (item 11, column B) is 91; i.e., the reciprocal of 110.

In the same manner man effectiveness is found to stand at a still lower level, namely 83.3. This ratio is obtained by dividing the man hour ratio, actual to budget, 84 (item 12, column A), by the production ratio 70, indicating that actual man hours were 120% of standard and then taking the reciprocal of this. A shorter method of figuring the effectiveness ratio directly is to divide the output ratio 70, by the man hour ratio 84.

An interesting ratio that cannot readily be obtained by any other means is the one shown as item 14, column B,

wage scale level, 105. It means that average hourly earnings are higher than standard, a condition the propriety of which might well be questioned in view of the fact that man effectiveness is so low. The wage scale level ratio is obtained by dividing the ratio of actual to standard wages, 126 (item 7, column B), by the ratio of actual to standard man hours, 120 (item 12, column B). The reasoning is that only two circumstances have combined to produce the ratio 126, and these are: (1) possible changes in the hourly ratio and (2) possible changes in output per capita. The ratio 126 is an "end ratio," so if we know the ratio on one of the two component factors the ratio on the other may be found by division.

Useful Barometers on Current Events

To what do these calculations lead? To several interesting uses. First, the ratios themselves are useful barometers on current events, bringing out the variances which are taking place. Second, the ratios obtained successively over a period of time also will denote the general trend.

They may be used singularly or in pairs. For example, supplies and expenses (item 7, column A) stand at a level of 66.5 at a time when production stands at a level of 70 (at standard), indicating a healthy control over indirect expenses. The effect of this control is observed in the cost ratio 95 (item 7, column B).

Third, an advantageous use of the ratios is to interpret variances by causes, in the manner shown in Table III, "Resulting interpretation of variances." The figures shown in this table account for the entire difference between actual and standard costs of production. The difference in the aggregate may often be reduced by the compensation of component variances.

Table III.—Resulting Interpretation of Variances

15. Actual cost of production	$2,255.40	
16. Standard cost of production	2,100.00	(Losses)
17. Increase actual over standard	($155.40)	

Cause of variances	Wages	Supplies Expense	Total
18. Machine effectiveness decreased		($126.00)	
19. Man effectiveness decreased	($168.00)		
20. Wage scale increased	(50.40)		

22. Expense level decreased		603.00	
23. Capacity unused		($414.00)	
24. Net variance actual vs. standard	($218.40)	$63.00	($155.40)
25. Production under budget	360.00	540.00	900.00
26. Net variance actual vs. budget	$141.60	$603.00	$744.60

It should be mentioned at this point that for the sake of simplicity item 9 in Table I, "production priced at standard cost per M., $2,100.00," is assumed to contain wages, supplies and expenses in the same proportions as the original budget (items 3, 4 and 5). Therefore the $2,100.00 is made up of $840.00 standard wages and $1,260.00 standard expense.

We are now ready to figure the variances in Table III. Machine effectiveness decreased (item 18) by 10%, because actual machine hours stand at 110% of standard (item 10, column B). Accordingly the standard expense in production contains a 10% loss, $126.00.

Man effectiveness decreased (item 19). Machine hours stand at 120% of standard (item 12, column B). Accordingly the standard wages in production contains a 20% loss, or $168.00 (20% of $840.000 in item 9).

The wage scale level increased (item 20) standing at 105 (item 14, column B). This involves a loss of $50.40 ($1,058.40/105×5).

Item 22: the expense level decreased, showing a saving in expenditure of $603.00, this being the difference between the $1,800.00 budgeted and the $1,197.00 spent.

Unused capacity (item 33) is 23%, inasmuch as 77% (item 10, column A) of available machine hours were actually used. 23% of the budgeted expense, $1,800.00, is $414.00.

Determining Deviations From Budget

The algebraic sum of these separate variances equals the total difference between actual and standard costs. If we now take into account the standard cost of production for the capacity that was not used (item 25) we shall derive

the amount by which the actual costs deviated from the original budget.

Thus far we have not given consideration to material variances. Table IV, "Material Variances," shows how these are computed.

Table IV.—Material Variances

27. Material required, at standard cost	$700.00		
28. Material used, at standard cost	805.00		
29. Material usage ratio and variance		115	($105.00)
30. Material used at actual cost	764.75		
31. Price ratio and purchasing variance		95	40.25
32. Material cost ratio and variance		109.3	($64.75)

The foregoing description covers only in part the uses of a standard cost method of industrial accounting designed along these lines. Please observe that there is no sacrifice of actual costs by substituting "standard costs," but rather that each supplements the other.

This does not mean that existing channels of obtaining data and existing methods of accounting must be scrapped. On the contrary if these are good they should be retained and merely transformed to embody standard costs. Some of the features which have been described will eventually take the place of former methods of presentation so that the transformation when complete will furnish better data in simpler ways with less effort to get and to use them.

BOOKS AVAILABLE

THE following books in the library of the Society may be borrowed, one at a time for a period of two weeks each, by any member who sends 10 cents in stamps to cover postage.

Donations of books to the library of the Society will be gratefully accepted.

Address correspondence to the Society's office, 81 Victoria Street, Toronto, Canada.

Book	Author
Bookkeeping by Single and Double Entry (Introductory Edition)	P. McIntosh
Bookkeeping by Single and Double Entry (Advanced Edition)	P. McIntosh
Bookkeeping by Single and Double Entry (Complete Edition)	P. McIntosh
Canadian Modern Accounting (Part I.)	A. F. Sprott and Frank G. Short, C.A.
Auditing Procedure (Old Edition)	W. B. Castenholz, A.M., C.P.A.
Auditing Procedure (New Edition)	
The Law of Negotiable Instruments in Canada	John Delatre Falconbridge, M.A., LL.B., K.C. and W. B. Castenholz, A.M. C.P.A.
How to Read a Profit and Loss Statement	Herbert G. Stockwell
Accountancy (2 copies)	Francis W. Pixley
Electric Railway Auditing and Accounting	Wm. H. Forse, Jr.
Controlling Profits (2 copies)	Eugene Herz
The Self-Proving Accounting System	A. O. Kittredge, F.I.A., and J. F. Brown
Accountancy Problems with Solutions	Leo Greendlinger, M.C.S.
Principles of Accounting	W. A. Paton, Ph. D., and R. A. Stevenson, Ph.D.
Manufacturers' Accounts	Wilton C. Eddis, F.C.A., and W. B. Tindall, A.C.A.
Accounting for Value as well as Original Cost	H. G. Baldwin
Municipal Bookkeeping and Auditing (Part 1)	O. J. Godfrey, F.C.A.
Municipal Bookkeeping and Auditing (Part 2)	O. J. Godfrey, F.C.A.
The Philosophy of Accounts (2nd Edition)	C. E. Sprague, A.M., Ph.D., C.P.A.
Dictionary of Costing	R. J. H. Ryall
Cost Accounting Procedure	W. B. Castenholz, M.A., C.P.A.
Canadian Commercial Correspondence and Business Training also A Manual of Shorthand Dictation (Revised Edition)	H. J. Russell, F.C.I.
The Taylor System in Franklin Management (Second Edition)	Lieut.-Col. G. D. Babcock (in collaboration with R. Trautschold)
Hotel Administration, Accounts and Control	D. J. O'Brien, M.A., C.P.A., and C. B. Couchman, C.P.A.
The Marketing Problem—How It is being Tackled in U.S.A.	E. T. Elbourne, A.M.I.
Applied Budgeting	Henry Bruère, and A. Lazarus, C.P.A., F.C.W.A.

"Horse Shoes"

By FRANK WILBUR MAIN

(From *The Certified Public Accountant*)

A BAR of iron is worth but a few dollars. When made into horse shoes its value increases to several hundred dollars; when converted into cutlery it becomes worth thousands of dollars; when converted into watch springs its value again increases tenfold and it is valued at tens of thousands of dollars; and when made into delicate surgical and dental instruments its value may become hundreds of thousands of dollars.

Bookkeeping is the bar of iron with which we all work. When we convert it into balance sheet audits and ordinary accounting services, we are turning our bar of iron into "horse shoes;" when we go into special cost work or similar specialized accounting service we are converting our bar into "cutlery" and perhaps into the higher valued instruments.

Answering again the oft raised question as to what is wrong with the accounting business, we might well say that we are making too many "horse shoes." The competition in the manufacture of "horse shoes" by certified public accountants and public accountants has resulted in very unsatisfactory business for many accounting concerns. The remedy, as this writer sees it, is not in any agreement, as is often proposed, for the maintaining of prices, but rather the conversion of our bar of iron into "cutlery," "watch springs," and "surgical and dental instruments."

There is more potential accounting business than can possibly be taken care of by several times the present number of certified public accountants if the thought and attention of accountants generally can be directed to the fact that there is not only greater possibilities of service, but much greater financial remuneration in doing the more difficult things rather than hurrying and scurrying to obtain as many "horse shoe" jobs as it is possible to get.